PUERPERAL ECLAMPSIA.*

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PUERPERAL Eclampsia is the term applied to convulsions, tonic or clonic in character, the foundation of which is laid in processes connected with pregnancy, labor and childbed. As indicated by the definition, the period of time during which these convulsions may occur, extends over the latter months of pregnancy, during labor, and for a brief period following confinement.

Thus Dewar reports a case in a woman aged twenty-eight, in whom convulsions occurred without warning, at the sixth month of pregnancy. Ten convulsions occurred. There was no albumen in the urine. Four days later she had seven more convulsions, and albumen was found in the urine. Three convulsions followed four months later. Edema and varicose veins existed in both legs. Three months later the baby was born, at term, in excellent condition. At this time albumen was absent from the urine. As there was no cause or suspicion of epilepsy, he believes the case to have been true puerperal eclampsia.

Many cases are reported during the eighth month. The majority of the cases occur during labor at term. One case under my observation began on the eighth day after a comparatively uneventful labor and lying in.

The etiology is obscure. There can be no question as to some relationship between the nearly constant albumenurea and the convulsive attacks. Yet, many pregnant women with albumenurea do not have convulsions, and equivalent amounts of albumen in urine in other pathological states do not produce the same convulsions. Sixty per cent of the cases are primiparæ. Twin pregnancies afford more than their proportion of eclamptic cases.

Schumacher of Strassburg, has injected urine into the circulation of animals and endeavored to ascertain its toxicity. Neither urine nor amniotic fluid is more toxic in case of eclampsia than in normal cases. The blood serum has likewise the same effect in eclampsia and in normal cases; the serum of the fetus is no more toxic than that of the mother.

Krönig and Füth of Leipsic, conclude from their experiments, that a change in the blood of eclamptic patients is not to be determined either by determination of the viscosity or of the specific weight. Wyder of Zurich, considers the disease an intoxication, not an infection, which does not continue after the birth of the child. In those cases where the attack occurs but once, and where it occurs days after the confinement, it is hard to recognize the fetal influence. Interesting in this connection is the fact that it has been determined by Blumreich and Zuntz, that the brain of pregnant animals reacts to smaller quantities of toxin which produces convulsions, than does the brain of non-pregnant animals. But finally, the *Journal of the American Medical Association* sums up the little we know regarding the etiology, by saying: "Taking it all in all, we must admit that eclampsia is a toxic disease, in which coagulative substances exist in the blood, but the source of these substances has not been determined."

No decisive proof is at hand to the effect that the intoxication is of fetal origin.

The pathology is nearly as clear as the etiology. On the one hand we have a paper by Fehling of Strassburg, in which he endeavors to support the following propositions:

1. There is no such thing as characteristic eclampsia placenta; 2, there is no form of kidney disease pathognomonic of eclampsia; 3, a connection between eclampsia and dilatation of the ureters is to be denied; 4, albumenurea is lacking only in the rarest cases of eclampsia; 5, there is no such thing as specific eclampsia liver; 6, a definite, characteristic, anatomic picture of eclampsia does not exist, according to the autopsy findings known at present; 7, the view that eclampsia is infectious is, at present, entirely without proof; 8, Bouchard's view that toxicity of the blood plasma, continued with a decreased toxicity, or an entire absence of toxicity of the urine, cannot be held; 9, the explanation of eclampsia as a lepatoxemia, or as a leukomainemia, is not proven; 10, some substance which causes coagulation, and which, carried in the circulation, seems to be of significance in the origin of the eclampsic changes in the body; 11, eclampsia is an intoxication of fetal origin.

On the other hand, Schmorl of Dresden, reports on the pathologic findings in seventy-three cases of eclampsia. In every case but one, he found the same changes in the secretory epithelium of the kidneys, parenchymatous, and fatty degeneration; in three cases hemoglobin infarcts; in seventy-one cases hemorrhagic and anemic necrosis of the liver, changes which begin at the periphery of the acini; in the other two cases he found a total thrombosis of the portal vein.

The changes in the liver have no relation to the severity of the convulsions. In ten cases icterus was present; in three he found similarity to acute yellow atrophy of the liver.

He thinks that bile salts are still more often present in the circulation, but that the time is too short to permit the coloring of the skin.. In sixty-six cases he found thrombi and hemorrhages in the lungs. In fifty-eight of sixty-five cases, he found capillary hemorrhages in the brain, often localized in the nucleus caudatus. In forty-two cases, hemorrhages in the heart muscles, with necrosis and parenchymatous and fatty degeneration.

The result of these studies is that eclampsia is characterized by definite pathologic findings, consisting of the degenerative changes in the secretory epithelium of the kidneys, hemorrhages

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and thrombosis of the liver, thrombosis, hemorrhages and softening of the brain, and the changes in the heart muscles.

Schmorl believes this picture more constant than the findings in cases of sepsis, poisoning, etc., where the pathologic picture may vary greatly, and yet, pathology considers the picture pathognomonic. In no other disease does the same complex occur.

Schmorl believes, therefore, that eclampsia is an identical disease in all cases, not a complex of symptoms. When the toxin is produced is not known. And, finally, Herzfeld reports eighty-three deaths out of four hundred and sixty-three cases of eclampsia, in ten years, in the hospital of Vienna. Of these eighty-one fatal cases, subsequent microscopic examination showed thirty-two instances of hemorrhagic hepatitis, and twenty-eight of parenchymatous degeneration of the liver. As to the condition of the kidneys, there were thirty-eight cases of Bright's disease, and twenty-eight of acute nephritis. Herzfeld adds to these, as another potent factor in producing eclampsia, compression of the ureters, which condition was frequently present, especially in primipara. He emphasizes the conclusion that when eclampsia occurs in primipara, during the early stages of pregnancy, ureters compression was found with great frequency, and considered as the chief cause, since there was absence of any marked change in liver or kidneys.

The prognosis is gradually becoming better; whereas the statistics of the German clinics ten years ago show an average mortality of twenty per cent, the figures for the past ten years show a fatality varying from ten to fifteen per cent.

The treatment—In this disease, especially, it is possible for us to do very much in the way of prophylactic treatment, for, as a rule, we are engaged for our patients prior to the time when the disease is liable to appear, and occasional examinations of the urine of pregnant women have now become the routine practice of all obstetricians.

In cases with albumen in the urine the prompt institution of strict milk diet, of attention to the bowels and skin, will tide most patients along to, and through confinement without convulsions; if, however, the prodromal symptoms of eclampsia appear, vomiting, pains in the stomach and head, and increasing quantities of albumen in the urine, many authorities recommend the prompt induction of premature labor. In a case where convulsions have begun, a rational treatment may be based on the following principles: (1) The woman must be confined by the most rapid method possible, without any too great consideration for the life of the child. (2) All obstetric manipulations should be performed in narcosis, on account of the heightened reflex irritability. (3) Painful attention to antiseptic and aseptic precautions. (4) The most careful study of the individual when using those drugs known as heart poisons—chloroform, chloral hydrate, morphin, veratrum viride. (5) Careful stimulation of the secretory activity of the kidneys, the skin and the bowels, to further the excretions of the toxins. (6) A removal of at least a part of the poisonous substances coursing in the circulation, or a dilution of the same, by bleeding in suitable cases, and subcutaneous, intravenous, or rectal salts infusions. (7) Increased oxidation of the blood by means of oxygen inhalations. (8) In cases of threatened heart collapse, excitants, such as camphor, ether, caffein. Five cases have recently come under my observation—four primiparæ, one with a fourth confinement. In one case convulsions occurred before labor; in a second, at the conclusion of the first stage; in a third and fourth, within twenty-four hours after delivery, and in a fifth (the multipara) on the eighth day after confinement. In case I, consciousness never returned after the first convulsion. Consultation was promptly had. Morphin injected, chloroform given, careful manual dilatation of cervix, forceps delivery without much evidence of shock, repair of perineum, chloral and bromide rectal injections, but nothing availed; the patient died about twenty-four hours after her first convulsion. No veratum was given in this case, the consultation ruled against it.

In case II, which had been slowly progressing for about ten hours, I happened to be in the room when convulsions began. Morphin hypodermic; chloroform at once; aid quickly called; forceps delivery, the cervix being already dilated. Veratum veride, freely and frequently, till its influence was distinctly noted in a slower and softer pulse, and kept up for two days; chloral and bromide by rectum. No convulsions occurred after she waked from the chloroform and her recovery was uneventful.

In cases III and IV the treatment was identical, except, that delivery having been already completed, no instrumental procedure was necessary, and no chloroform was given. Veratum was given in each case, with immediate and pronounced benefit.

Case V had been in convulsions, alternating with coma, for twelve hours when I saw her. Her attending physician had gone home, after announcing that she would die in a few minutes, and promising to send the undertaker around in the morning.

When she failed to comply with his prognosis in a couple of hours, I was called into the case. Hypodermic veratum; rectal injections, chloral and bromide; later, hypodermic morphin, and she began to swallow a little veratum by the mouth; mustard to spine and cold on head. The

interest in the case was pleasantly varied by the husband, who had spent two terms in the asylum, going mad again, and having to be subdued and gotten out of the way during the most anxious period of the treatment. After two days, convulsions ceased, stomach, bowels, kidneys, skin, heart and lungs took up their respective functions in good shape, but her mind was gone. She was sent to Stockton, and after about six months of treatment, was restored to her family, sound in body and mind, and showing but little trace of the frightful ordeal she had been through.

In all these cases a combined treatment was used, and it is impossible to estimate the exact proportion of benefit which should be ascribed to each element of the treatment. But it is my opinion, and was likewise forcibly borne in upon my professional brethren, who watched these cases with me, that from the action of veratum we received more benefit than from all the other measures combined. I regard it as very nearly a specific, if given promptly, freely and frequently. I have seen no symptom that caused me any uneasiness, arising from its use, but in each case in which I used it, and after almost every time I administered it, I could notice positive and beneficial results.

THE CALIFORNIA STATE JOURNAL OF MEDICINE will be issued hereafter on the first of the month. Communications and advertisements must be in by the 15th to insure publication the following month.

Boycotting Doctors.—The strikers in Waterbury, Conn., have been having "high jinks" in their own way, but nothing that they have done deserves so much to bring down public wrath on their heads as their recent attempt to boycott the doctors. According to the *Herald*, these labor agitators have just issued an "unfa.." list (which means a kind of blacklist) in which are included the names of some prominent physicians of the town. These practitioners are boycotted because they used the trolley cars to answer hurry calls, and because *they dressed the wounds of injured conductors and motormen.* We trust this report will be widely read in the United States. The spirit displayed by these strikers is strongly suggestive of that of the French Revolution when it was at its worst. Civilization would not be worth a farthing if such men are to dictate terms. When the day comes when a physician has to ask permission of a mob to give his aid to the sick and injured, and to suffer a boycott if he ignores its unholy mandates, it will be time for civilization to go out of business. We honor these physicians and should like to have their names.—*Philadelphia Medical Journal.*

Treatment of Asthma.—Dr. C. H. Baker in the *Journal of the Michigan State Medical Society:* "Did you ever hear the expression, 'gunning for sparrows with a cannon?' I was reminded of this expression recently in looking over a widely distributed publication, an index of remedies compiled from standard works in medicine, and seeing how extensive was the list of remedies recommended in asthma. Only seven other ailments, tuberculosis among them, had an equal number, and the list was not as complete as it might have been made. There were no less than sixty remedies in this confession of ignorance, as it ought to have been called, and their actions were the most varied and opposite in character. You had your choice between nerve sedatives and nerve stimulants—sedatives to respiration and circulation and stimulants ditto; alkalis and acids, astringents and counterirritants, emetics and anesthetics; remedies suited to gout, syphilis and ague, digestive and antiseptics, electricity and hynotism; or, all these failing, there were still steam, smoke, mud, climate, clothes, surphur and spectacles." Dr. Baker in summing up claims that asthma "is a reflex disorder primarily due to nasal pressure, intermittent or constant, occurring in a patient of the neurotic temperament. Asthma can be cured in many and relieved in most cases by such measures as will remove this pressure."

Etiology of Cancer—Dr. Alexander R. Becker of Seattle, writing in *American Medicine,* says, with reference to Dr. Homer Wakefield's paper on "Pathology of Katabolism," that he brings a "wealth of hypothesis to bewilder the unprepared mind, but so controlled by the most advanced biochemic knowledge and clinical experience and demonstration, and keen logic, as to demand the very best and closest study of the best pathologists everywhere. An autohyperacidity—*i. e.,* subalkalinity—local or general, causing a suboxidation, which leads to subkatabolism and then stasis in the tissues, while anabolism goes on. There is nothing dramatic about that; no bacterium to hold up to opprobrium, or from which to manufacture an antitoxin and fame and wealth and decorations. But he declares the malignancy of a neoplasm to be practically a matter of degree; of a superlative or prolonged local hyperacidity, which produces a coexistence of adolescent and mature and degenerating cells, of living and necrotic matter, within a circumscribed area—a confused mass, both histologically and chemically, with contradictory efforts at life and products of death, and therefore fully capable of its clinical results. By age and habit I am averse to hasty judgment, and yet I freely admit that this hypothesis and argument has aroused my real enthusiasm. Still, it is only as one of the old guard that I venture to express myself while awaiting the dicta of the masters of pathology."

Operation for Bunion.—A longitudinal incision, not more than half or three-quarters of an inch in length, along the line of the inner surface of the extensor tendons, exposes the site of the hyperostosis, and a sharp chisel separates the button of the bone readily from the head of the metatarsal bone. The open bursa can then be trimmed out with a pair of scissors without difficulty, and when the wound is sutured and the skin pressed against the surface of bone from which the bunion was removed, it becomes quickly adherent and the bunion is at an end.—*International Journal of Surgery.*

Preventive Medicine. *Science:* "We know of no branch of science which has contributed so much during the past twenty-five years to the sum total of human happiness than sanitary science, and perhaps no field affords better prospects for fruitful results than the endowment of a school of preventive medicine."